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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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08/986,696 12/08/97 JEJELOWO

M 97U001

EXAMINER

IM62/1012

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HOUSTON TX 77056-2723

RABAGO, R

ART UNIT

PAPER NUMBER

1713

DATE MAILED:

10/12/99

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

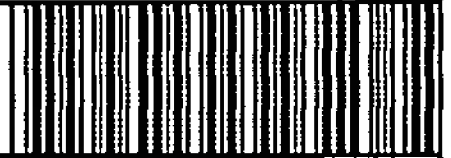
Office Action Summary

Application No.
08/986,696

Applicant(s)
Jejelowo et al.

Examiner
R. Rabago

Group Art Unit
1713



☒ Responsive to communication(s) filed on Jul 12, 1999

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 10-14, 16-23, 25-32, and 51-53 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 10-14, 16-23, 25-32, and 51-53 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
☐ received.

☐ received in Application No. (Series Code/Serial Number) _____

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 9

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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DETAILED ACTION

1. Amendment to claims 10-14, 21, 27 and 28, cancellation of claims 1-9, 15, 24 and 33-50, presentation of new claims 51-53 and associated remarks is acknowledged.
2. The rejection under 35 USC 102(e) over Turner '208 is withdrawn in view of amendment.
3. The rejection under 35 USC 103(a) over Cheruvu '019 is withdrawn in view of argument.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

- 12/10/7/99
- ⑤ Claims 10-14, 16-23, 25-³²~~31~~, and 51-53 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

I) Claims 10-14, 16-23, 25, 26, 28-31, and 51-53 are rejected as indefinite because the addition of the word "type" to an otherwise definite expression extends the scope of the expression so as to render it indefinite. Ex parte Copenhaver, 109 USPQ 118 (Bd. App. 1955).

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ii) Claims 10-11, 14, 16-19, 21-23, 25-26, 28-31, and 51 are rejected as indefinite because no clear definition of the term "bulky" is provided in either the claims or in the specification. While exemplary species are mentioned, the intended scope of the claims cannot be determined.

✓iii) Claims 27, 32 and 53 are indefinite because they include a melt index limitation without any indication of the method of measuring this property. Applicants are advised that the requirement that $f=0$ in claims 27, 32 and 53 renders the inclusion and description of R^{'''} meaningless because bridged ligands would be expressly excluded.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

✓7. Claims 10-12, 14, 16, 28-30, 51 and 52 are rejected under 35 U.S.C. 102(e) as being anticipated by Harrington 5,621,054.

Examples 1-3 are deemed to anticipate these claims.

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8. Claims 10-14, 16, 27, 32 and 51-53 are rejected under 35 U.S.C. 102(b) as being anticipated by Doyle et al. 5,387,660.

Examples 6 and 7 are deemed to anticipate these claims.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Harrington 5,621,054.

Parent claims are discussed with respect to this reference above. The reference discloses all aspects of the claimed invention but does not include the support in the working examples. However, patentee discloses the use of supports at col. 5, line 18+. One of ordinary skill in the art would be motivated to use a support because patentee has disclosed that such use is beneficial, especially for slurry processes, with reasonable success expected.

11. Claims 17, 20 and 28-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doyle et al. 5,387,660.

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Parent claims are discussed with respect to these claims above. The reference discloses all aspects of the instant claims but does not include all claimed process limitations in the working examples. However, patentee stated that copolymerizations (col. 2, lines 55-64), continuous conditions (col. 4, line 22), and smaller alkyl substituents (col. 3, lines 50-60) are preferable, providing suitable motivation for one of ordinary skill in the art to use such alternative embodiments, with reasonable success expected.

12. Claims 18, 19, 21-23, 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doyle et al. 5,387,660, optionally in view of Tsutsui 5,714,426.

Parent claims are discussed with respect to the primary reference above. Doyle discloses all aspects of the claimed invention except for the use of a supported catalyst and the use of gas-phase conditions. However, such conditions are entirely conventional in the art, and one of ordinary skill in the art would be motivated to use them in the routine optimization of the copolymerization process, with reasonable success expected. See Tsutsui col. 9, lines 50-67, and col. 14, line 8. One of ordinary skill in the art would reasonably look to Tsutsui for additional guidance in optimizing the polymerization disclosed in Doyle because the same monomers and highly similar hafnocene species are used.

13. Claims 10-14, 16-23, 25, 26, 28-31, and 51-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jejelowo et al. 5,281,679.

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The reference teaches all elements of the claimed invention (col. 4-8, 13-18) but does not contain a working example wherein hafnium is used. However, given patentee's clear indication that hafnium is among the three "most preferred" metals (col. 7, line 42), one of ordinary skill in the art would be motivated to use it, with reasonable success expected.

Applicant's arguments filed 7/12/99 have been fully considered but they are not persuasive. Applicants argue that the rejection is infirm because the reference does not address improvements in catalytic activity by controlling substituents on the bulky ligand of a hafnocene. However, a reference need not reveal the particular benefit discovered by applicants in order to anticipate or render obvious the claimed subject matter. Furthermore, as the reference is specifically directed toward metallocenes which have C₃-C₅ alkyl Cp substituents (see examples of Jejelowo '679, col. 17-18), any assertion of unexpected results must be based upon the suggested substitution of hafnium for the exemplified zirconium in C₃-C₅ alkyl-substituted metallocenes. The results of the comparative examples show only that C₃-C₅ alkyl substituted hafnocenes show better activities than hafnocenes with smaller substituents, and are therefore not relevant to the substitution suggested in Jejelowo '679.

Conclusion

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rob Rabago whose telephone number is (703) 308-4347. The examiner can normally be reached from 6:30 to 3:00.

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If attempts to reach the examiner by telephone are unsuccessful and the matter is urgent, the examiner's supervisor, David Wu, can be reached on (703) 308-2450. The fax phone numbers for the organization where this application or proceeding is assigned are:

(703) 305-5408 (official), (703) 305-3599 (official after final) and (703) 306-3429 (unofficial).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0651.

David Wu
DAVID W. WU
PRIMARY EXAMINER
GROUP 1500

RRabago *RR*

October 6, 1999